

Patent claims

1. Apparatus for use in a system, that dispenses a medium capable of flowing that undergoes a change to a state of lower viscosity in case of an increase in temperature, the apparatus comprising the following:

- a container to receive a medium,
- a melting device to cause the increase in temperature of a proportion of the medium and alter it to a state of lower viscosity,
- an outlet zone with at least one passageway for the part of the medium with lower viscosity,

characterized in that

- a storage unit is provided for the part of the medium with lower viscosity,
- the storage unit is equipped with a level or filling level sensor,
- a cooling device) is present for the purpose of enabling active cooling of the outlet zone) and/or the melting device after a proportion of the part of the medium with lower viscosity has passed through the passageway into the storage unit.

2. Apparatus according to Claim 1, characterized in that the melting device includes heating cartridges, resistive lines or heating wires that can be heated by electric current.

3. Apparatus according to Claim 1 or 2, characterized in that the melting device includes a temperature sensor and a control unit.

4. Apparatus according to Claim 1 or 2, characterized in that the outlet zone includes a grill provided with several passageways.

5. Apparatus according to one of the above claims, characterized in that the outlet zone is traversed by at least one channel through which a coolant or gas can flow.

6. Apparatus according to Claim 5, characterized in that the cooling device includes a circulating cooler which removes heat from the coolant after the latter has flowed through the outlet zone.

7. Apparatus according to one of the above claims, characterized in that the cooling device and the melting device are separately realized.

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8. Apparatus according to Claim 1, characterized in that the storage unit is heatable.

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9. Apparatus according to one of the above claims, characterized in that the cooling device comprises a refrigeration compressor, heat exchanger or Peltier cooler.

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10. System with an apparatus according to one of the above claims, characterized in that the system comprises a pump to impel the part of the medium with lower viscosity.

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11. System according to Claim 10, characterized in that the system comprises one or more heatable hoses and dispensing devices.

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12. System according to Claim 10, characterized in that the system comprises a cover with follower plate which can exert pressure on the medium by means of a press, the follower plate preferably being equipped with a flexible joint seal that can be subjected to pressure.

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13. System according to one of Claims 10 to 12, characterized in that the medium is a polyurethane glue (PUR).

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14. Process for dispensing a medium capable of flowing on demand, in which viscous, solid or pasty medium is made available in a container in the following steps:

- Interrogation as to whether sufficient medium capable of flowing is present in a storage unit,
- If so, extraction of the medium capable of flowing out of the storage unit,
- If not, local heating of the viscous, solid or pasty medium in the container by means of a melting device, in order to lower

the viscosity of the medium until the latter flows through one or more passageways into the storage unit,

- During the heating process, repeated interrogation as to whether sufficient medium capable of flowing is still present in the storage unit,
- If so, deactivation of the melting device and activation of a cooling device, in order to hinder or reduce further melting of medium.

10 15. Process according to Claim 14, characterized in that a pump to extract medium capable of flowing from the storage unit is switched on as soon as sufficient medium capable of flowing is present in a storage unit.

15 16. Process according to Claim 14, characterized in that the container is provided with a follower plate which follows the medium down in the container each time medium is extracted.

20 17. Process according to Claim 16, characterized in that the follower plate is provided with a press that exerts pressure on the medium in the container.

25 18. Process according to Claim 17, characterized in that

- the press is switched on after the melting device has been switched on, in order to exert pressure on the viscous, solid or pasty medium,
- the press is switched to pressure-free mode before the cooling device is switched on.

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